SUPERFUND
Fact Sheet
COMMENCEMENT BAY NEARSHORE/TIDEFLATS
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EPA'S REFINED LIST OF SEDIMENT DISPOSAL SITES

This fact sheet provides information about the status of the cleanup plans for the Thea Foss and Wheeler-Osgood, Middle and Hylebos waterways and invites public comment on the U.S. Environmental Protection Agency's (EPA) preliminary screening of sediment disposal locations. It also summarizes the factors used by EPA for evaluating disposal sites for these three waterways and includes EPA's preliminary refined list of disposal sites.

EPA invites your comments and will consider them as we make final cleanup decisions in the fall of1999.

A 45-day comment period begins July 1 and will end August 16, 1999.

Please send your comments to:

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Background: The1989 Record of Decision – Cleanup Objectives

The cleanup objective as described in the 1989 Record of Decision (ROD) for Commencement Bay states that "the selected remedy is to achieve acceptable sediment quality in a reasonable time frame." "Acceptable sediment quality" is defined as "the absence of acute or chronic adverse effects on biological resources or significant human health risks." It is defined both in terms of biological and chemical tests that are described in Section 7 of the ROD. The ROD also established acceptable chemical levels in sediment called sediment quality objectives (SQOs). Habitat function and enhancement of fisheries resources is also an overall project cleanup objective.

The ROD selected a generalized remediation approach consisting of source control, natural recovery and sediment confinement to address contaminated sediments in the waterways of the Commencement Bay Nearshore/Tideflats Superfund site. The objectives under source control are to control sources of contamination to the waterways prior to implementation of active remediation in the waterways and to monitor source control effectiveness.

For areas expected to recover naturally to the SQOs within a 10-year time frame, the ROD calls for implementation of natural recovery. For areas that are not expected to recover within a 10-year time frame, the ROD specified that active remediation of problem sediments would be accomplished by utilizing a limited range of four confinement technologies. These technologies are in-place capping,

confined aquatic disposal, nearshore disposal, and upland disposal. The ROD also stated EPA's preference that a nearshore disposal option only be utilized in conjunction with projects that would otherwise be permitted for commercial development. This preference is in recognition of the high value of intertidal habitat and its role in sustaining fishery resources.

The ROD also concluded that the selected remedy described above represented the maximum extent to which permanent solutions and treatment technologies could be utilized in a cost-effective manner at the Commencement Bay Nearshore/Tideflats (CB/NT) site. To determine whether the conclusion about treatment technologies was still valid ten years later, EPA Region 10 asked the EPA National Risk Management Research Laboratory in Cincinnati, Ohio to review site-specific data that has been generated at the three waterways since the ROD and provide Region 10 with an opinion about the viability and cost-effectiveness of currently available treatment technologies. The laboratory completed review of the Thea Foss and Wheeler-Osgood waterways data and concluded that the most likely to succeed remedial alternative continues to be confinement and disposal. The alternatives the laboratory considered before arriving at this conclusion included biological treatment, chemical treatment, thermal treatment or destruction, and extraction treatment. None of the treatment technologies reviewed were judged to be able to treat the contaminated sediments in a timely and cost-effective manner. The laboratory is currently reviewing the data for Hylebos and Middle waterways, and we expect to receive their conclusions shortly.

Where We Are Today: Thea Foss and Wheeler-Osgood Remediation Plan

Consistent with the ROD, the contamination in Thea Foss and Wheeler-Osgood waterways has been carefully studied and today we are confident that we know what chemicals are present where and at what concentrations. The City of Tacoma continues to refine its recommended cleanup plan for remediating the waterway which was presented to EPA in the Draft Round 3 Data Evaluation and Pre-Design Evaluation Report in July 1998. In large part, EPA supports the City's recommended in-water remediation plan and generally supports the proposed locations for natural recovery, dredging and capping (Alternative 5B). At this point, EPA is awaiting the City's refinements to that plan in the following areas before EPA approves the cleanup plan:

- provide further evidence that the identified natural recovery areas will recover in the 10-year time frame;
- confirm depths to which harbor areas will be dredged and capped;
- determine whether compensatory mitigation for habitat impacts due to in-water remediation is necessary and appropriate;
- further refine the model inputs being used to determine whether source control will be sufficient to prevent sediment recontamination;
- identify additional source control actions that will be taken to reduce and/or eliminate the risk of recontamination;
- propose effective remediation for the head of the waterway (that addresses non-aqueous phase liquid (NAPL) seeps); and
- obtain U.S. Army Corps of Engineers approval to reduce navigation depths at the head of Thea Foss waterway.

EPA is also working closely with the Department of Ecology, which is the lead agency on the Coal Gas site and on upland source control activities overall. EPA and Ecology are working together to ensure that Ecology's cleanup plan for the Coal Gas site adequately protects the waterway from future recontamination from upland Coal Gas sources.

It is expected that the City will provide EPA with satisfactory answers (including supporting data) concerning the above issues by the fall of 1999. EPA anticipates that Ecology will select a protective cleanup plan for the Coal Gas site this summer.

Where We Are Today:
Hylebos Waterway Remediation Plan

The Hylebos Cleanup Committee (HCC) has been conducting pre-design studies for the Hylebos Waterway sediment cleanup since November 1993. Pre-design studies are nearly complete. Hundreds of chemical and biological samples have been taken to characterize areas of contamination. EPA has sufficient information to determine which areas require cleanup and hopes to finalize a cleanup plan for contaminated Hylebos Waterway sediments in the next few months.

Two areas of the Hylebos Waterway are being studied separately and will require separate cleanup plans, because the materials present are different than the rest of the waterway sediments. A group of wood products companies are working with Ecology to investigate the extent of wood debris contamination in the turning basin at the head of the waterway. They are also evaluating options for remediation of wood debris. Ecology plans to issue a fact sheet with a proposed cleanup plan for wood debris this fall. In addition, Occidental Chemical Company is working with EPA to investigate the extent of and cleanup options for sludge-like material and a contaminated intertidal area at their former plant at the mouth of Hylebos Waterway. The sludge-like material may require treatment before disposal, and plans are underway to bench test some of the treatment options. EPA will issue a separate proposed cleanup plan for this area at the end of this year.

In addition to the sediment investigation and cleanup, EPA has been working with Ecology to address sources of contamination to the Hylebos Waterway. Ecology has inspected virtually every active industrial facility on the Hylebos Waterway, and has required 29 of them to take some action to control sources of pollution. At this time, source control work is nearly complete, with 26 facilities having completed needed source control actions. Source control work is expected to be completed by the end of this year.

EPA is also working with the U.S. Army Corps of Engineers to determine whether the Superfund cleanup can be combined with maintenance dredging of the Hylebos Waterway navigation channel. This would increase the volume of sediments needing dredging and disposal, but would help to ensure that no further dredging of the Hylebos Waterway would be needed for several years.

EPA hopes to have a proposed contaminated sediment cleanup and disposal plan for the Hylebos Waterway sediments by the fall of 1999. EPA plans to select a disposal site or sites that are large enough to accommodate sediments from both the Superfund cleanup and the maintenance dredging project, if the Corps decides to go forward with maintenance dredging.

Where We are Today:
Middle Waterway Remediation Plan

Under a 1997 administrative order with EPA, the Middle Waterway Action Committee (MWAC--a group of three potentially responsible parties) completed the first round of predesign sediment characterization in 1998. Based on this information, MWAC calculates that 60,000 to 75,000 cubic yards of sediments from Middle Waterway may require active cleanup. A final round of sampling in 1999 will provide the remaining information necessary to determine sediment remedial areas and volumes and to support selection of a waterway remediation plan. Based on the current schedule and volume estimates, it is likely that Middle Waterway sediments will be

disposed of with sediments from Thea Foss or Hylebos waterways.

Where We Are Today:
Selection of Disposal Sites

The schedules for cleaning up Thea Foss, Hylebos and Middle are converging such that at this point EPA can evaluate its disposal needs from a baywide standpoint taking into account the total estimated volume of disposal capacity needed by all three sites. The baywide disposal capacity needed may be as high as 2 million cubic yards (see Table 1).

EPA has heard from the public that the following are important considerations when selecting a disposal site for any of the waterways in Commencement Bay:

- Move forward with cleanup remedies quickly. Delay allows continued exposure of aquatic organisms to contaminated sediments.
- EPA should take a baywide approach to selecting disposal sites.
- Keep the number of disposal sites to a minimum.
- The process and decisions should be consistent with the 1989 ROD and agreed orders for the waterways.
- There should be ample opportunity for involvement by all participants and the public in the selection of disposal sites.

The recent listing of Puget Sound chinook salmon as a threatened species under the Endangered Species Act has emphasized the need for EPA to work with the National Marine Fisheries Service (NMFS), Washington Department of Natural Resources (DNR), other natural resource agencies, the Tribes and other interested parties to evaluate habitat impacts and habitat enhancement opportunities on a baywide basis. Consistent with the ROD cleanup goal to enhance habitat function and fisheries resources, EPA, DNR and the City of Tacoma hired Charles Simenstad (Senior Fisheries Biologist from the University of Washington) to conduct a baywide habitat assessment of Commencement Bay to assist the Agency in assessing the habitat concerns associated with in-water disposal sites and, to the extent practicable, incorporate effective salmon recovery components into our cleanup decisions. This baywide assessment wil be completed in September 1999. It should be noted that results of the baywide assessment and consultation with NMFS may require adjustment of the preliminary conclusions about the disposal sites.

Table 1

ESTIMATED VOLUME OF SEDIMENTS NEEDING DISPOSAL

Waterway	***Volume***
Thea Foss/Wheeler Osgood	625,000[1] cy
Hylebos	725,000[2] -1,100,000[3] cy
Middle	60,000 - 75,000[4] cy
Total	1,410,000 - 1,800,000 cy

1 From draft Round 3 Data Evaluation and Pre-Design Evaluation Report, June & July 1998 and recent request by DNR to increase depth in harbor areas.

2 Low end estimate that does not include dredging of subsurface contamination in navigational channel.

3 High end estimate that includes dredging of subsurface contamination in navigation channel. From draft Hylebos Waterway Pre-Remedial Design Evaluation Report, May 1999.

4 Recent field investigations (12/98) for est. volumes from the Mouth of Middle Waterway.

In addition, over the last two years, EPA has sponsored several “Disposal Sites Forum” meetings to discuss options for sediment disposal with members of the public, government agencies, Indian tribes, and industry representatives. In those meetings, a number

Table 2

Disposal Site Capacity

Site	*Capacity*	*Owners*	*Type*
Blair Slip 1	640,000 cy	Port of Tacoma	N.S.[5]
Hylebos/ Blair Penin.	632,000 cy	Port of Tacoma & DNR	N.S.
St. Paul	600,000 cy & up	Simpson	N.S.
Mouth of Hylebos	676,000 cy & up	DNR	CAD[6]
HylebosTurning Basin	640,000 cy	Port of Tacoma	CAD
Mouth of Thea Foss	600,000 cy & Up	DNR	CAD
East-West Road	500,000 - 600,000 cy	Port of Tacoma	Upland
Regional Landfill	2,000,000 cy	Private	Upland

[5] N.S.=Nearshore
[6] CAD=Confined Aquatic Disposal

of candidate sites have been identified as the most promising sites for disposal of contaminated sediments. These candidate sites are: Blair Slip 1, Hylebos/Blair Peninsula, St. Paul Waterway, Mouth of Hylebos, Hylebos Turning Basin, Mouth of Thea Foss, and East/West Road (see Table 2). EPA recently added consideration of a regional landfill to further evaluate the upland disposal option. The capacity at the candidate disposal sites ranges from 500,000 to 676,000 cubic yards each although some sites can potentially be expanded to accept larger volumes. It is clear that, except for the regional landfill, no one disposal site currently under consideration will likely accommodate the baywide disposal needs.

Available information indicates that any of the currently proposed candidate disposal sites could be engineered to be protective of human health, prevent migration of contaminants back into the environment, and achieve compliance with the National Contingency Plan (NCP) threshold criterion for protectiveness. The finally selected disposal sites will also need to comply with applicable, relevant and appropriate regulatory requirements (ARARs) which is also a threshold criterion. EPA believes any of these disposal sites can be made compliant with ARARs, although further discussions with other regulatory agencies is needed to address such issues as the amount of compensatory mitigation needed and compliance with the Endangered Species Act.

Evaluation Factors

In the meantime, applying the nine evaluation criteria used for selection of Superfund remedies, and the evaluation factors required under other laws such as the Clean Water Act and the Endangered Species Act, EPA has developed more specific factors for purposes of comparing the disposal sites to each other. The factors we have considered are listed below:

- Availability
- Capacity
- Cost Effectiveness
- Technical Challenges
- Habitat Impact
- Habitat Enhancement Opportunity
- Otherwise permitted commercial project (ROD preference associated with a nearshore fill)

Factors such as Availability, Capacity, Cost Effectiveness and Technical Challenges are intended to help focus on the question of implementability of the candidate disposal options.

EPA has also preliminarily compared the candidate disposal sites to each other in relation to the NCP modifying criteria of:

- Community acceptance
- State and Tribal acceptance

Our purpose in the evaluation was to identify the advantages and disadvantages of each of the candidate disposal sites to help identify the one(s) offering the most effective and feasible means of achieving the stated cleanup objective. After considering the information available to date, the evaluation also begins our analysis of which sites present the most practicable alternatives for disposal of the contaminated sediments without unacceptable impacts to the aquatic system. It is EPA's intent to focus future work by the potentially responsible parties, such as design and planning, on a refined list of the most promising disposal sites. The other sites, while not eliminated at this time, will not receive further detailed analysis unless one or more of the promising sites are removed.

Applying the above factors to the candidate disposal sites, EPA has refined the list and is now proposing to focus its consideration of disposal sites on what it considers to be the most promising four sites. Not in any order of preference, these sites are:

- Blair Slip 1
- St. Paul Waterway
- Hylebos Upper Turning Basin
- Mouth of Hylebos

Along with the above four in-water sites, EPA is retaining the option to send some excess volume of contaminated sediment to a regional upland landfill.

The following pages describe the evaluation EPA conducted to arrive at the refined list of sites.

Availability

EPA considers sites available if they are currently being offered for disposal by property owners or could reasonably be acquired through purchase, lease or other negotiated compensation.

The landowner of the St. Paul Waterway has made the site available for disposal and, in fact, has actively pursued selection of St. Paul Waterway as a disposal site for Superfund cleanups. The landowner of Blair Slip 1 has indicated that the site is available if Superfund can meet the Port of Tacoma's development schedule. Availability of the other candidate sites is far less clear. DNR owns the land for the Mouth of the Thea Foss CAD, the Mouth of the Hylebos CAD and partially, along with the Port of Tacoma, owns the Hylebos/Blair Peninsula nearshore site. DNR has stated on a number of occasions, including in a press release, that it opposes siting a disposal facility at the Mouth of the Thea Foss because it believes future expansion of the navigation channel would be foreclosed. DNR's position as to the availability of the Mouth of the Hylebos is less clear. DNR has raised some technical concerns about siting a disposal facility at the Mouth of the Hylebos which need to be addressed. With respect to the availability of the Hylebos/Blair Peninsula, in agency meetings DNR has not indicated objections to siting a disposal site at that location.

The Port of Tacoma owns Blair Slip 1, the Hylebos Turning Basin, the upland property at East/West Road, and partially owns the Hylebos/Blair Peninsula. In public settings, Port staff have stated that the Port opposes use of the East/West Road site as a disposal site because it is inconsistent with development plans for that site. EPA has requested formal clarification from the Port whether the East/West Road site is available. The Port has not expressed acceptance for the Hylebos Upper Turning Basin as a disposal site. The Port believes the Hylebos/Blair Peninsula has potential as a nearshore fill.

In summary, EPA has determined that the sites that are clearly available for use as disposal sites are: St. Paul Waterway, Blair Slip 1 and the regional landfill. The Hylebos/Blair Peninsula appears to be available as well. EPA is in the process of formally seeking clarifica-

tion from the Port as to the availability of the East/West Road site. It is unclear whether DNR would make the Mouth of the Hylebos available for use as a disposal site. It is also unclear whether the Port would make the Hylebos Upper Turning Basin available. Information to date indicates that the Mouth of the Thea Foss is not available for use as a disposal site.

Site Capacity

EPA defines site capacity as the ability of any site, either individually or in combination to accommodate the disposal of contaminated sediments.

All the sites, except for the regional upland site, appear to have an estimated capacity in the range of 500,000 to potentially more than 676,000 cubic yards (see Table 2). The regional upland site potentially has the capacity to contain the entire volume of contaminated sediments that require disposal. The in-water disposal sites with the greatest flexibility in terms of accommodating a range of capacity needs are the confined aquatic disposal sites because they are more amenable to enlarging the footprint without significantly increasing habitat impacts than the nearshore options. Recent information from the HCC evaluations indicate that a disposal facility at the Mouth of the Hylebos could be expanded to contain 1,300,000 cubic yards.

However, with the exception of the regional upland disposal site, it is unlikely that any one site will accommodate the total volume of contaminated sediments that is projected to need disposal. Given the current information about available capacity at the candidate disposal sites, only the regional upland site can accommodate the full disposal amount needed by Thea Foss and Wheeler-Osgood, Middle and Hylebos Waterways. At least two and perhaps three of the in-water disposal sites are needed to accommodate the volume of contaminated sediments that will need confinement.

Cost Effectiveness

The Superfund law calls for EPA to implement cleanups that are cost effective. A cost-effective disposal site(s) achieves EPA's cleanup objectives at a reasonable cost. In general, disposal sites that are protective of human health and the environment, can meet ARARs, and are equally likely to achieve cleanup objectives but are disproportionately more costly are considered not to be cost-effective. However, EPA must balance cost-effectiveness with the other primary balancing factors discussed here, including ARARs.

Assuming a 600,000 cubic yard disposal volume and with the cost information known to date, disposal site costs range from a low of $5,627,000 for the St. Paul Waterway fill to a high of $28,570,000 for disposal at a regional upland site (see Table 3, page 8). For purposes of this analysis there are three ranges of costs that the disposal sites fall into:

- low (costs ranging from $5,000,000 to $10,000,000);
- medium (costs ranging from $10,000,000 to $15,000,000); and
- high (costs above $15,000,000).

The St. Paul Waterway, Thea Foss CAD, Blair Slip 1, and the Hylebos Upper Turning Basin fall into the low cost category. The Mouth of the Hylebos CAD, and the East/West Road, fall into the medium cost category. The Hylebos/Blair Peninsula and the regional landfill fall into the high cost category. The Hylebos/Blair Peninsula differs from other nearshore disposal sites in that three sides of the nearshore fill rather than one would need to be built, maintained and monitored. Thus higher costs are associated with the engineering and maintenance of that fill option. The costs for use of the regional landfill are two to three times higher ($28,570,000) than costs

TABLE 3

COST*

	Total Cost	*Cost Per Cubic Yard*	*Land Aquisition Cost*
East/West Road Upland	$12,894,000	$21	Unknown
Regional *Upland*	$28,570,000	$48	N/A
St. Paul *Nearshore*	$5,627,000	$ 9	N/A
Thea Foss *CAD*	$7,305,000	$12	$8,000,000-$40,000,000
Hylebos/Blair *Nearshore*	$16,776,000	$28	Unknown
Blair Slip 1 *Nearshore*	$7,357,000	$12	Unknown
Hylebos *CAD*	$10,050,000	$17	Unknown
Hylebos Upper *Turning Basin*	$8,958,000	$15	Unknown

* Based on a volume of 600,000 cubic yards

associated with any of the other candidate sites.

It should be noted that for a number of these sites there are potential cost uncertainties that could significantly increase disposal costs. For example, land acquisition costs for any of these sites have not been explicitly included in the cost estimates. At sites such as St. Paul where the landowner will benefit financially from the fill project, land acquisition costs appear to have been internalized by the project proponent. However, for other sites, land acquisition costs will likely be required by the landowner. For example, DNR has notified the City of Tacoma (letter dated June 5, 1998) that the value of using state owned aquatic land at the Mouth of the Thea Foss is in the range of $8 to $40 million. Likewise, we anticipate that land acquisition costs would be a factor at the Mouth of the Hylebos, and the Hylebos/Blair Peninsula or at any site where disposal is proposed on state owned aquatic land or on Port of Tacoma property.

Another example of potential cost uncertainty is the cost associated with any mitigation necessary for the use of a disposal site. At this time, mitigation packages for each site are at different levels of detail. The St. Paul Waterway has a defined mitigation plan that is included in the cost estimate. Mitigation costs are also included in the cost estimate for Blair Slip 1 based on the package submitted to the Corps as part of their permit request. However, EPA has informed the Corps and the Port that the mitigation offered is inadequate, so it is likely that further refinement of the mitigation package for Blair Slip 1 will be needed before an acceptable mitigation plan is approved. All the other in-water disposal sites have either higher costs, greater cost uncertainties, or both.

In summary, EPA concludes that St. Paul Waterway is the most cost-effective because it falls into the low cost category and, except for the regional landfill, has the fewest cost uncertainties. While there are fewer cost uncertainties with the regional upland site, it is at least two to three times more costly than the in-water disposal sites.

Technical Challenges

There are technical challenges associated with any of the candidate disposal sites. For example, while materials handling is a challenge for all the disposal sites, it is a particular challenge for the regional landfill because the sediments have to be dewatered and transported off site. A dewatering site would need to be found that could handle large volumes of sediment that would be barged from the waterways to the upland staging area for dewatering purposes before being transferred to trucks and hauled to the upland site. Return flows from the dewatering process would need to be managed and the water may need

to be treated before leaving the site. There would be significant short-term impacts associated with trucking the dewatered sediments to the upland facility. For example, with a truck and trailer that could haul 20 yards of material at a time, it would take 30,000 trucks with trailers to haul 600,000 cubic yards of material to the upland landfill. To haul 2 million cubic yards, it would take 100,000 trucks with trailers.

Direct placement of contaminated sediments into the East/West Road site by pipeline dredge is technically possible, but involves many similar technical challenges to the regional landfill alternative regarding management of the dewatering process.

Technical challenges associated with the in-water disposal sites vary. For the confined aquatic disposal (CAD) sites at the mouth of the waterways, the cap would have to be built to withstand erosion since sites like the Mouth of the Hylebos are in high energy areas. For the nearshore fills, berm stability is an issue particularly in the event of an earthquake. For the Hylebos Upper Turning Basin, construction will require excavating a large hole in the bottom of the waterway. The excavated material will have to be staged somewhere, and all of this material will have to be moved while accommodating commercial ship traffic, and timed to avoid impacts to migrating salmon.

Habitat Impact

At a Disposal Sites Forum meeting focused on habitat issues, EPA presented an overview of the quality of the habitat located at the disposal sites and gauged the severity of the impact of the filling on the quality of that habitat. The presentation rated habitat quality as high, medium or low. These values arose from group discussions between EPA and the Natural Resources Trustees.

The disposal sites that would have the lowest overall impact on habitat were the East/West Road upland site and the Hylebos Turning Basin. The Mouth of the Hylebos and the Mouth of the Thea Foss were considered to have medium quality habitat but it was thought that the filling would not have long-term detrimental effects and was therefore judged to have low impact on the habitat. Hylebos/Blair Peninsula and Blair Slip 1 were considered to have medium quality habitat but because the filling would eliminate that habitat, the impact of the filling was thought to be high. The St. Paul Waterway was thought to have both high quality habitat because it contains mudflats which are considered a “special aquatic site” under the Clean Water Act, and the filling would have a high impact by eliminating that habitat.

It should be noted that this was a preliminary evaluation. We are conducting further analyses and await the outcome of the baywide assessment being conducted by Charles Simenstad to confirm and/or revise these judgments.

Habitat Enhancement Opportunities

Due to the objective in the ROD to enhance habitat function and fisheries resources and due to the recent listing of Puget Sound chinook salmon as threatened under the Endangered Species Act, it is EPA’s intention to combine cleanup with opportunities for habitat enhancement particularly in the siting and design of disposal sites.

The recent preliminary conclusion by NMFS is that the mitigation proposed for the filling of the St. Paul Waterway is sufficient to allow them to conclude that the St. Paul fill is not likely to jeopardize the continued existence of listed salmon stock (letter dated June 1, 1999). However, NMFS makes no statement nor presupposes what the biological assess-

ment for the Thea Foss remediation plan will conclude as far as impacts to the species or habitat. Therefore, NMFS has not taken a position that the mitigation proposal results in enhancement of the habitat for salmon. EPA awaits the conclusions of the Simenstad baywide assessment to determine whether the proposed mitigation provides habitat enhancements that further salmon recovery efforts. The mitigation plans associated with the other disposal sites have received less scrutiny by resource agencies than the one proposed for the St. Paul fill and it is premature to make any judgments about the extent to which habitat enhancement is achieved.

The baywide assessment will allow EPA to make better judgments about the adequacy of the other mitigation plans and help guide their development. Nonetheless, EPA intends to secure appropriate mitigation to compensate for habitat losses and maximize habitat enhancement opportunities in making final cleanup decisions.

ROD Preference That Nearshore Fills Only Be Utilized in Conjunction With Permitted Commercial Development

While not a requirement of the ROD, this policy preference recognizes the high value of nearshore habitats in sustaining fishery resources. That being said, the ROD recognizes that commercial development is likely to occur and that it sometimes occurs in the nearshore environment. To ensure that as little nearshore habitat is filled as possible and to avoid expansion of impact to this environment, the ROD sets forth EPA's preference for nearshore fills as disposal sites in conjunction with projects that would otherwise be permitted commercial development. The intent in the ROD is to take advantage of permitted nearshore development projects so that they serve dual purposes of containment of contaminated sediments and commercial development, thereby minimizing impact to the nearshore environment.

Of the nearshore candidate sites only Blair Slip 1 fits this category and can benefit from this preference. By formally seeking a fill permit under section 404 of the Clean Water Act, the Port of Tacoma has demonstrated that it intends to move forward with a fill project on the basis of a water dependent development use. Consequently, if approved by the Corps of Engineers, Blair Slip 1 would be filled with either clean material or contaminated material. In such a case, the ROD preference is to have EPA take this opportunity to fill the site with contaminated material and thereby reduce the need for disposal of contaminated sediments elsewhere in the environment.

The St. Paul fill proposal is dissimilar because Simpson has not applied for a permit. While Simpson has indicated that the fill proposed for St. Paul will allow Simpson to expand and update its operations, Simpson has not demonstrated a need for expansion either as part of a formal site development or management plan, or by formally initiating a Clean Water Act section 404 permit request.

The intent in the ROD is to take advantage of permitted nearshore development projects so that they serve both purposes and thereby minimize impact to the nearshore environment.

Community Acceptance

Under the NCP, community acceptance is a modifying criterion that usually gets evaluated after EPA issues a proposed cleanup plan for public comment. However, because Commencement Bay has had active public involvement throughout the study process and public input on disposal sites in the context of the Disposal Sites Forum, public preferences for the various sites have been

expressed and are summarized here.

The St. Paul fill proposal has received strong public support. No other disposal site has received such strong support. EPA has received letters of endorsement and support from such diverse groups as the Tacoma Chapter of Trout Unlimited, Citizens' for a Healthy Bay, Tahoma Audubon Society, The League of Women Voters, Kaiser Aluminum, and others. It has also received support from various political entities, including City and County council members, State legislators and Congressional members.

It should be noted that some of the natural resource agencies have expressed concern about the negative habitat impacts of the St. Paul fill and have pointed out that it is more environmentally damaging than other fill proposals.

EPA has also received comments from the public against siting a disposal facility at the Mouth of the Thea Foss. Citizens for a Healthy Bay has indicated that residents near the Mouth of the Hylebos would object to siting a disposal facility there.

State and Tribal Acceptance

State and Tribal acceptance is also a modifying criterion in Superfund regulations. EPA has received input from DNR and the Puyallup Tribe on a few of the proposed disposal sites, which is summarized below.

Jennifer Belcher, Commissioner of Public Lands, has endorsed the Simpson proposal to fill St. Paul (May 1998 press release) and views it as an essential step in Commencement Bay White River chinook salmon habitat recovery efforts as well as facilitating the cleanup of the Thea Foss Waterway.

The St. Paul project has also been endorsed by the Puyallup Tribe of Indians. The Puyallup Tribe has also expressed opposition to siting a disposal facility at the East/West Road location because of its proximity to and impact on tribal residences.

Summary of EPA's Rationale for Refined List of Disposal Sites

Based on the above comparative analysis, EPA believes the most promising option is some combination of one or more of the following disposal sites for cleanup of Commencement Bay waterways: Blair Slip 1, St. Paul Waterway, Hylebos Upper Turning Basin, and, potentially, some configuration for a CAD at the Mouth of the Hylebos. The latter is contingent on that site being in fact available, i.e., DNR approval of use of state owned aquatic lands. These sites together should provide sufficient capacity for disposal of the estimated 2 million cubic yards of dredged contaminated sediments from the waterways of Commencement Bay. In the event they do not, EPA retains the option to use the regional upland landfill for excess amounts of material that cannot be accommodated by the finally selected in-water disposal sites.

It should be noted that EPA has not included the East/West Road upland site as one of the promising disposal sites. Even though upland disposal would be least environmentally damaging to the marine environment, the East/West Road upland site has significant drawbacks. It remains unclear whether the site is available for use. It has significant short-term impacts; there are significant Puyallup Tribe objections to siting a disposal site at that location; and its estimated cost ($12,894,000) relative to the other alternatives lead EPA to conclude that it is not a promising site. It is also one of the sites that has cost uncertainties due to yet to be defined land acquisition costs. EPA instead has chosen to evaluate an available upland alternative with sufficient capacity to meet disposal needs. Unfortunately, costs of disposal at a regional landfill indicate that upland disposal is not cost-effective ($28,570,000 to dispose of 600,000 cubic yards). It should be

noted that if all the contaminated sediments estimated to need dredging (approximately 2 million cubic yards) were to be sent to a regional upland facility total costs would be $95,240,000. Whereas if three in-water disposal sites are used, the costs would be in the range of $25,000,000 to contain the same volume of sediments (approximately 2 million cubic yards).

EPA has also screened out from further consideration the Mouth of the Thea Foss. Primary considerations for this were that DNR objects to using the land at that location in that manner; potentially high cost uncertainties associated with leasing the land from DNR for disposal; and public concerns and objections. EPA has also screened out the Hylebos/Blair Peninsula from further consideration primarily due to its high cost relative to the other in-water disposal alternatives. The Hylebos/Blair Peninsula has similar habitat impacts to any other nearshore fill but higher costs because of the extensive construction and engineering required to build a three-sided containment berm. In addition, because it has not had much interest from a project proponent, no mitigation has been proposed to offset the impact of the fill.

Finally, it should be noted that the results of the baywide assessment may require some adjustment to the above preliminary conclusions about the three (and potentially four) candidate in-water disposal sites. In addition, EPA is in the process of completing biological assessments on the remediation plans which it will submit to NMFS for concurrence. NMFS may provide recommendations for inclusion of "reasonable and prudent measures" into the remediation plans that may affect the mitigation needed to offset the habitat impacts and the above preliminary conclusions.

EPA will evaluate recommendations from the PRPs for the various waterways regarding which disposal site(s) are most appropriate for the individual waterways. EPA will consider the public's comments on this preliminary evaluation, the factors used to evaluate the disposal sites, and on the preliminary conclusions contained in this fact sheet. EPA will take these comments and recommendations into account when it makes final cleanup decisions this fall.

Schedule for Final Remediation Decision

EPA plans to make final remediation decisions for Thea Foss and Hylebos waterways in the fall of 1999, including selection of disposal sites and mitigation requirements

In making those decisions, we will also allow for sufficient capacity to include Middle Waterway sediments in either the Thea Foss or Hylebos disposal sites.

More Information

For more information, please call:

Christine Psyk, EPA Project Manager, at **(206) 553-1748**,

Allison Hiltner, EPA Project Manager, at **(206) 553-2140**, or

Jeanne O'Dell,
Community Involvement Coordinator, at **(206) 553-6919**

You may also call our toll free number:
1-800-424-4372

EPA invites your comments on the preliminary refined list of disposal sites.
A 45-day comment period begins July 1 and will end August 16, 1999.

Please send comments to:

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Written information and technical documents are available for review at:

Tacoma Main Public Library
1102 Tacoma Avenue South

Citizens for a Healthy Bay
917 Pacific Avenue, Suite 406

U. S. Environmental Protection Agency
1200 Sixth Avenue, Seattle
7th Floor Records Center

To ensure effective communication with everyone, additional services can be made available to persons with disabilities by contacting one of the EPA representatives.

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